

Continuation of Application no 09/792, 196
Preliminary Amendment

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-56 (canceled)

Claim 57. (new): A barrier film for limiting transmission of oxygen and moisture there-through comprising:

- (a) a polymer substrate having a first vacuum-formed plasma-treated surface;
- (b) a vacuum-deposited, first radiation-polymerized acrylate monomer film having first and second surfaces, the first surface of the first polymerized film being disposed on the first plasma-treated surface of the polymer substrate; and
- (c) an inorganic layer having first and second surfaces, the first surface of the inorganic layer being disposed on the second surface of the first polymerized film;
wherein the second surface of the inorganic layer is a plasma-treated surface.

Claim 58 (new): The barrier film of claim 57, wherein the polymer substrate is formed from a thermoplastic polymer.

Claim 59. (new): The barrier film of claim 57, wherein the polymer substrate is formed from a thermoset polymer.

Claim 60. (new): The barrier film of claim 57, wherein the inorganic layer comprises a material selected from the group consisting of aluminum, zinc, nickel, cobalt, iron, iron

on aluminum, zinc on silver, zinc on copper, zinc on aluminum, nickel-cobalt alloy, nickel-cobalt-iron alloy, a silicon oxide, tantalum oxide, aluminum nitride, silicon nitride, silicon oxy-nitride, zinc oxide, indium oxide, and indium tin oxide.

Claim 61. (new): The barrier film of claim 60, wherein the inorganic layer comprises a material selected from the group consisting of aluminum oxide and a silicon oxide.

Claim 62. (new) A barrier film for limiting transmission of oxygen and moisture there-through comprising:

- (a) a polymer substrate having a first vacuum-formed plasma-treated surface;
- (b) a vacuum-deposited, first radiation-polymerized acrylate monomer film having first and second surfaces, the first surface of the first polymerized film being disposed on the first surface of the first plasma-treated surface of the polymer substrate;
- (c) a first inorganic layer having first and second surfaces, the first inorganic layer being disposed on the second surface of the first polymerized film; and
- (d) a vacuum-deposited, second radiation-polymerized acrylate monomer film having first and second surfaces, the first surface of the second polymerized film being disposed on the second surface of the first inorganic layer;

wherein the second surface of the second polymerized film is a vacuum-formed plasma-treated surface.

Claim 63. (new): The barrier film of claim 62, wherein the polymer substrate is formed from a thermoplastic polymer.

Claim 64. (new): The barrier film of claim 62, wherein the polymer substrate is formed from a thermoset polymer.

Claim 65. (new): The barrier film of claim 62, wherein the first metal layer is formed from a material selected from the group consisting of aluminum, zinc, nickel, cobalt, iron,

iron on aluminum, zinc on silver, zinc on copper, zinc on aluminum, nickel-cobalt alloy, and nickel-cobalt-iron alloy.

Claim 66 (new): A barrier film for limiting transmission of oxygen and moisture threrethrough comprising

- (a) a polymer substrate having first and second plasma-treated surfaces,
- (b) a vacuum-deposited, radiation-polymerized acrylate monomer film disposed on each of the first and second plasma-treated surfaces of the polymer substrate; and
- (c) an inorganic layer disposed on at least one vacuum-deposited, radiation polymerized acrylate monomer film.